

L Number	Hits	Search Text	DB	Time stamp
1	1441	((524/322) or (524/400)).CCLS.	USPAT; US-PGPUB	2003/01/09 14:29
2	14	((524/322) or (524/400)).CCLS.) and golf\$	USPAT; US-PGPUB	2003/01/09 14:39
3	670	(524/322).CCLS.	USPAT; US-PGPUB	2003/01/09 14:39
4	664	((524/322).CCLS.) not (((524/322) or (524/400)).CCLS.) and golf\$)	USPAT; US-PGPUB	2003/01/09 14:39
5	72	((524/322).CCLS.) not (((524/322) or (524/400)).CCLS.) and golf\$)) and (neutrali\$ or ionomer\$)	USPAT; US-PGPUB	2003/01/09 14:58
6	204	(473/385).CCLS.	USPAT; US-PGPUB	2003/01/09 14:58

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File: DWPI

Jun 7, 2002

DERWENT-ACC-NO: 2001-432463

DERWENT-WEEK: 200278

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TITLE: Thermoplastic composition useful in making golf ball components, comprises an aliphatic, mono-functional organic acid and an acidic copolymer

INVENTOR: CHEN, J C; STATZ, R J

PRIORITY-DATA: 2000US-0558894 (April 27, 2000), 1999US-0422142 (October 21, 1999)

## PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
KR 2002042870 A	June 7, 2002		000	C08L023/08
WO 200129129 A1	April 26, 2001	E	027	C08L023/08
AU 200080291 A	April 30, 2001		000	C08L023/08
BR 200015054 A	July 2, 2002		000	C08L023/08
EP 1222226 A1	July 17, 2002	E	000	C08L023/08

INT-CL (IPC): A63 B 37/00; C08 F 220/06; C08 K 5/098; C08 L 23/08; C08 L 33/02

ABSTRACTED-PUB-NO: WO 200129129A

## BASIC-ABSTRACT:

NOVELTY - A composition comprising a thermoplastic polymer contains:

(a) ethylene, 3-8C alpha , beta -ethylenically unsaturated carboxylic acid copolymer and ionomer and

(b) at least one aliphatic, mono-functional organic acid(s) having less than 36 carbon atoms or its salt.

DETAILED DESCRIPTION - A thermoplastic polymer composition comprises (a) E/X/Y copolymer, and (b) at least one aliphatic, mono-functional organic acid having less than 36 carbon atoms or its salt.

E = ethylene;

X = 3-8C alpha , beta -ethylenically unsaturated carboxylic acid; and

Y = softening comonomer or ionomer of E/X/Y copolymer.

The amount of X and Y is 0 - 30 wt.% each. Greater than 90% of all the acid of (a) and (b) is neutralized. The thermoplastic composition when formed into a sphere of 1.5 - 1.54 inches in diameter, has a coefficient of restitution (COR) of at least 0.785 (preferably 0.8, especially 0.81) measured by firing the sphere at an initial velocity of 125 feet/second against a steel plate positioned 3 feet from the point where initial velocity is determined and dividing the velocity of rebound from the plate by the initial velocity and an Atti compression of not more than 100.

INDEPENDENT CLAIMS are also included for the following:

(A) preparation of a highly-neutralized, melt-processable ionomer involving:

(a) melt-blending the ethylene alpha , beta -ethylenically unsaturated carboxylic acid copolymer or melt-processable ionomer with the organic acid or its salt, and

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File: DWPI

Aug 27, 2002

DERWENT-ACC-NO: 2000-364871

DERWENT-WEEK: 200271

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TITLE: Thermoplastic elastomer composition for making golf balls comprises thermoplastic elastomer, salt of organic acid, ionomer, and optionally filler

INVENTOR: CHEN, J C; HAGMAN, J F ; STATZ, R J

PRIORITY-DATA: 1998US-105193P (October 22, 1998), 1998US-105065P (October 21, 1998), 1998US-105232P (October 21, 1998), 1998US-105181P (October 22, 1998), 1999US-0422142 (October 21, 1999), 2001US-0960208 (September 22, 2001)

## PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 2002527597 W	August 27, 2002		090	C08L101/00
WO 200023519 A1	April 27, 2000	E	041	C08L023/08
EP 1124898 A1	August 22, 2001	E	000	C08L023/08
US 20020091188 A1	July 11, 2002		000	C08L001/00

INT-CL (IPC): A63 B 37/00; A63 B 37/04; A63 B 37/12; A63 B 45/00; C08 K 3/00; C08 K 5/09; C08 L 1/00; C08 L 23/08; C08 L 23/26; C08 L 67/02; C08 L 101/00

ABSTRACTED-PUB-NO: US20020091188A

## BASIC-ABSTRACT:

NOVELTY - A composition comprises (wt.%): thermoplastic elastomer (1-35), salt of organic acid (5-40), filler (0-60), and ionomer (balance). The thermoplastic elastomer is copolyetheramide, copolyetherester, elastomeric polyolefin, block polystyrene polydiene copolymer, or polyurethane.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for (a) a process for making a thermoplastic elastomer composition comprising melt-blending an ethylene alpha, beta -ethylenically unsaturated carboxylic acid copolymer or a melt-processable ionomer, and concurrently or subsequently adding cation source to neutralize more than 90% of all the acid groups; and for (b) one-, two-, or three-piece, or multi-layered golf balls having a core and a cover with mantle(s) made from the above composition.

USE - The composition is used for making one-, two-, or three-piece or multi-layered golf balls. It is also useful as foamed material in footwear and other sport balls such as softballs.

ADVANTAGE - The invention is not too expensive, has high resilience, and is durable with low enough hardness or compression.

ABSTRACTED-PUB-NO:

WO 200023519A EQUIVALENT-ABSTRACTS:

NOVELTY - A composition comprises (wt.%): thermoplastic elastomer (1-35), salt of organic acid (5-40), filler (0-60), and ionomer (balance). The thermoplastic elastomer is copolyetheramide, copolyetherester, elastomeric polyolefin, block polystyrene polydiene copolymer, or polyurethane.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for (a) a process for making a thermoplastic elastomer composition comprising melt-blending an ethylene alpha, beta -ethylenically unsaturated carboxylic acid copolymer or a melt-processable